mysteryServer1.py

```
#!/usr/bin/env python3
from socket import *
import datetime, time, random
s = socket(AF_INET, SOCK_STREAM)
s.bind(("127.0.0.1", 7069))
s.listen(5)
while True:
   c,a = s.accept()
#   print("Received connection from" , a)
   time1 = time.time()
   nowtime = datetime.datetime.now()
   toSendString = "hello from " + gethostname() + nowtime.strftime(" %A %I:%M")
   toSendBytes = toSendString.encode()
   c.send(toSendBytes)

   if random.random() > 0.5:
     time.sleep(1)
   time2 = time.time()
   interval = time2 - time1
   toSendString = " now after %.6f " % interval
   toSendBytes = toSendString.encode()
   c.send(toSendBytes)
   c.close()
```

client.py

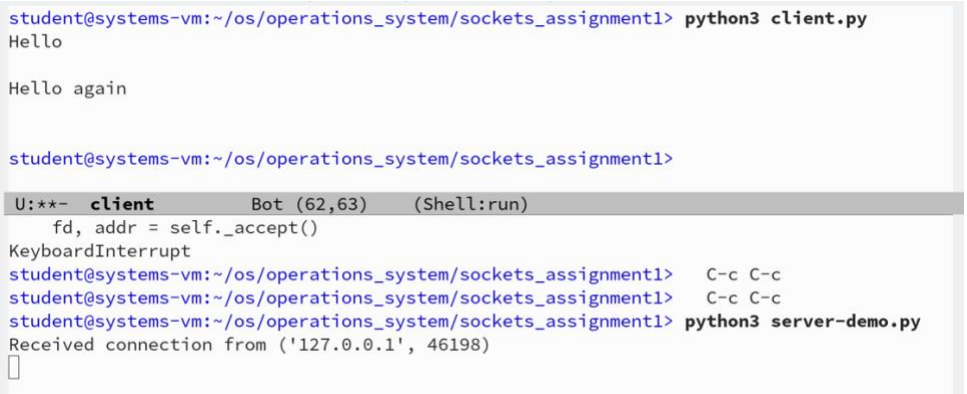
```
#!/usr/bin/env python3
from socket import *
import time
s = socket(AF_INET, SOCK_STREAM)
s.connect(("127.0.0.1", 7069))
while 1:
   data = s.recv(10000).decode()
   print(data)
   if len(data) == 0:
      break
s.close()
```

server-demo.py

```
#!/usr/bin/env python3
from socket import *
import time
s = socket(AF_INET, SOCK_STREAM)
s.bind(("127.0.0.1", 7069))
s.listen(5)
while True:
   c,a = s.accept()
   print("Received connection from" , a)
   c.send(b"Hello\n")
   time.sleep(0.5)
   c.send(b"Hello again\n")
   c.close()
```

Commands:
python3 server-demo.py
python3 client.py

First, run server-demo.py, and secondary run client.py. After client is connected to server side, it an message of confirmation prints on server side and prints out messages on client side. Receives two messages from server-demo.py. Between two messages, there is going to be a time sleep of 0.5.



Commands:
python3 mysteryServer1.py
python3 client.py

First run mysteryServer1.py and then run client.py. After connecting to server side, it will print out the current time and save the first current time. Random.random() will get a random and compare if it is greater than 0.5 which is 50% of possibilities. Since it is 50%, sometimes it waits 1 second to print the second message or do not wait 1 seconds and prints right away.

```
student@systems-vm:~/os/operations_system/sockets_assignment1> py
thon3 client.py
hello from systems-vm Thursday 01:40
 now after 1.001214

student@systems-vm:~/os/operations_system/sockets_assignment1>
U:**-  server          Bot (37,63)     (Shell:run)
student@systems-vm:~/os/operations_system/sockets_assignment1>
C-c C-c
student@systems-vm:~/os/operations_system/sockets_assignment1>
C-c C-c
student@systems-vm:~/os/operations_system/sockets_assignment1> py
thon3 mysteryServer1.py

U:**-  client          Bot (39,0)      (Shell:run)
```

← Example when waits for 1s

```
student@systems-vm:~/os/operations_system/sockets_assignment1> py
thon3 client.py
hello from systems-vm Thursday 02:04 now after 0.000054

student@systems-vm:~/os/operations_system/sockets_assignment1>
U:**-  server          Bot (44,63)     (Shell:run)
student@systems-vm:~/os/operations_system/sockets_assignment1>
C-c C-c
student@systems-vm:~/os/operations_system/sockets_assignment1>
C-c C-c
student@systems-vm:~/os/operations_system/sockets_assignment1> py
thon3 mysteryServer1.py
```

← Example of not waiting 1s